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CENTRAL INTELLIGENCE AGENCY

INFORMATION REPORT

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COUNTRY Czechoslovakia

REPORT

SUBJECT Precision Engineering Works Lisen,
Viliam Široky Plant at Kysucke Nove
Mesto

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This is UNEVALUATED Information

THE SOURCE EVALUATIONS IN THIS REPORT ARE DEFINITIVE.
THE APPRAISAL OF CONTENT IS TENTATIVE.
(FOR KEY SEE REVERSE)

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1. The Viliam Široky Plant of the Precision Engineering Works Lisen. (Zavody presneho strojarenstva Lisen, n.p.), National Enterprise, is located west of the Kysucke Nove Mesto railroad station, along the marshalling yard. The boundaries are: on the north - a field path to the forest; on the south - a road leading to the village of Neslusi; and on the west - a railroad track, parallel with the fence.
2. Construction of the plant started early in 1949, and on October 28th, 1949 the first three machines were put into operation. Building is still going on. Along the marshalling yard the plant is about 700 meters long. Its width is approximately 450 meters.
3. The plant is engaged in the production of ball bearings. Following is a list of standard types of ball bearings produced at the plant:
 - a. 6202 (this is the smallest type: opening 15 mm, diameter 36 mm, width 10 mm.)
 - b. 6203
 - c. 6204
 - d. 6205
 - e. 6206
 - f. 6302
 - g. 6303
 - h. 6304
 - i. 6305

Production figures vary according to monthly plans. The plan for January 1953 was 100,000 ball bearings; for February 1953 - 90,000; and for March 1953 - 120,000. About half of the total output are ball bearings of type 6202, the rest vary according to orders. At the end of January 1953, an order was received for 1,600 ball bearings, type 6412, to be allegedly used in Tatra plan cars. So far only nine types of ball bearings have been produced, but in the future production is to be expanded to 36 types. The entire ball-bearing production of Czechoslovakia is to be centered in this plant. Production at the branch

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25 YEAR RE-REVIEW

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plant at Pernstejn is to be discontinued and at the main plant in Lisen only ball bearings and roller bearings are to be made in the future. Only cages and similar auxiliary parts will be made in Pernstejn. Cages for bronze slide bearings are made at the V. Široky Plant. Planned monthly production is 1,600 pieces. (See sketches D, E,) Actual production amounts to about 80% of the monthly plan. The percentage of rejects is very high owing to the inferior quality of materials which cannot be hardened to the required degree, as the material is apt to break during the hardening process. The production of balls is being fulfilled to 40-45% of the plan, also due to the shortage of quality material. Balls are either too soft or break in the hardening process. Sometimes the required roundness cannot be achieved and balls come out oval-shaped. The worst results are in the production of cages, only 27-30% of the planned output being produced, partly because this work is poorly paid and also because not enough experts are available to organize the work. Products are classified into three quality groups: a) First-class, b) Second-class, d) Inferior. Products of the first group are destined for export; of the second group for the domestic market. As to precision, this plant is the best in Czechoslovakia. Its ball bearings are as good as foreign products, but owing to inferior material they have a much shorter life. First-class products are exported chiefly to the USSR and other People's Democracies. Exports amount to about one half of total production - approximately 40,000 ball bearings per month. About 40,000 ball bearings of the second and third classes are sent monthly to state reserve stores or to various plants. Material is shipped by rail from the foundries. Whenever foundries are unable to supply the required material, CRK steel is obtained from the main works at Lisen. Materials vary in quality, from first-class to inferior. The tool shop suffers the greatest difficulties because of its need for special types of steel. Most difficult to obtain is material R 3, a high-speed steel, and the plant has to have a special permit when ordering it. Products are made from substitutes, R 7 or R 24. Spring steel, types SC or SCH, for universal chucks for automatic machines, is also in very short supply. Special steel for surface hardening, type TEM, TEL and TY 3, is not available at all and T 8 is being substituted. Equally difficult to obtain are larger diameter rounds, and buyers travel all over the country to look for them in the state reserve stores, but usually in vain. Material from old railroad cars is being used instead. To keep up production at any cost, substitutes are being used, e.g., cutting tools in automatic machines which should be 4 mm. thick are made of steel 20 mm. thick which often results in 50% losses of good-quality materials, as well as in big financial losses. Even under normal circumstances, the production of ball bearings would not be profitable, because prices of the goods abroad barely cover production cost.

4. Altogether, there are about 1,500 employees at the plant, 50% of them women. 10% of the total number are skilled workers, e.g. lathe-turners, locksmiths, and other technical workers. The rest are people transferred from other jobs. The majority of women work in the control department and operate automatic finishing machines. The assembly shops employ only women. 35 to 40 of the employees are Czechs, mainly skilled workers from Lisen. As of 1954, the plant is to be run only by Slovaks. During 1953, Slovak technical experts from other plants, mainly from Povazska Bystrica, were transferred to the V. Široky Plant. It is expected that after the Czech experts leave production will be still lower. Plans for the expansion of the factory provide for the future employment of 12,000-14,000 persons. The plant operates in three shifts, of which only the first is fully manned; the second shift 70%; and the third 40%.

During 1954, production may be expanded by 20% at most, because skilled workers are not available in sufficient numbers. New workers have to train for 3 months at the main factory in Lisen. Working morale is below average and sometimes very low. The main reason is low wages and the majority of employees claim that they could earn far more elsewhere. They are not allowed to change employment. Part of the technical staff are Slovaks, whose skill and intelligence are below average, and they owe their good positions solely to politics. This has disastrous effects on production. There are only 20 to 25 staunch Communists at the plant and the majority of employees are not even organized in the Communist Party.

5. The leader of the innovators' movement at the plant is Karel Rohacek, manager of the lathe shop. In fact, however, nothing was done for improving and speeding up the production process, except a great deal of fuss over meaningless suggestions. A notorious shockworker at the plant

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is Jaroslav Klima. [REDACTED]

[REDACTED] works
manager Vaclav Zitny. [REDACTED]

6. There are 30 boys and 30 girls at the apprentice school. In 1952, the Labor Department of the District National Committee issued an order that only apprentices not completely physically fit could be recruited, while the fit ones were to be taken into the mining industry. Following this order the number of female apprentices increased considerably. Apprentices' training lasts two years. The school is badly equipped; some machines are completely out of operation. In charge of the apprentice school is Charvat (fnu), a Higher Political School¹ graduate. Apprentices live in a hostel and march to their place of work every morning.
7. Women working in assembly shops, on grinding machines, and in control departments earn 500 crowns (net) monthly. Skilled machine operators earn 800 to 900 crowns (net) monthly. A further cut in wages is expected when higher working targets are fixed.
8. Till April 1, 1953, the manager of the plant was Andelin Muzikar of Brno-Kralovo Pole. [REDACTED] His successor is Bagala (fnu). [REDACTED]
Deputy manager is Ing. Antonin Matejcek. [REDACTED]
9. Chief of construction is Vojtech Pleskac. [REDACTED]
10. Chief engineer (a new title for the plant's head engineer) is Nahlik (fnu) [REDACTED] 25X1
[REDACTED]
[REDACTED] Chief of ball-bearing production is Jindrich Wolf, [REDACTED]
[REDACTED]
[REDACTED] Cadre official Klacan (fnu) used to be a market vendor. [REDACTED]
[REDACTED] In charge of the tool shop is Frantisek Eibel, [REDACTED]
[REDACTED]
[REDACTED] Chief of the plant control is Frantisek Vozobule, [REDACTED]
[REDACTED]
The plant security official used to be a Czech. Homola (fnu). [REDACTED]
[REDACTED]
[REDACTED] the SNB station at Kysucke Nove Mesto is now supervising both the militia and the factory guards.
11. The factory guards consist of about 15 men and two women. They are on duty at the gate and in guard rooms inside the production halls. At night they patrol the factory. All carry pistols.
12. There are about 30 militia-men in the factory who attend drill and live shooting exercises once a fortnight. [REDACTED] only about half of them are reliable Communists. 25X1

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13. Food served in the canteen is below average. It is generally thought that employees are being cheated. The factory physician, Kouril (fnu). [redacted]

[redacted] Really in charge of the medical room is his assistant, a nurse from Zilina. Kouril refuses to sign any sickness certificates. The dental surgeon is very good. Lavatories are in a deplorable state, because the cleaners refuse to clean them. Cloakrooms have cold water only.

14. Power is supplied by the power plant in Zilina, but, because it is not available in sufficient quantity, frequent power cuts are necessary. All machines are numbered and, in case of power cuts, the factory broadcast system orders machines of certain numbers to be switched off. Power cuts are most frequent in winter and around midday. In spite of the broadcast, workers leave the machines switched on purposely with the result that sooner or later the whole plant is cut off by the power plant.

15. Addresses: Telegrams: Prestro Kys. N. Mesto.
Teleprint: Prestro Kysuca 09540.
Railroad station: Kys. N. Mesto.

1. [redacted] Comment: Possibly the College (Vysoka Skola) of Political Sciences and Economics, in Prague.

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Enclosure: 1 map section with legend (1 page - Air)

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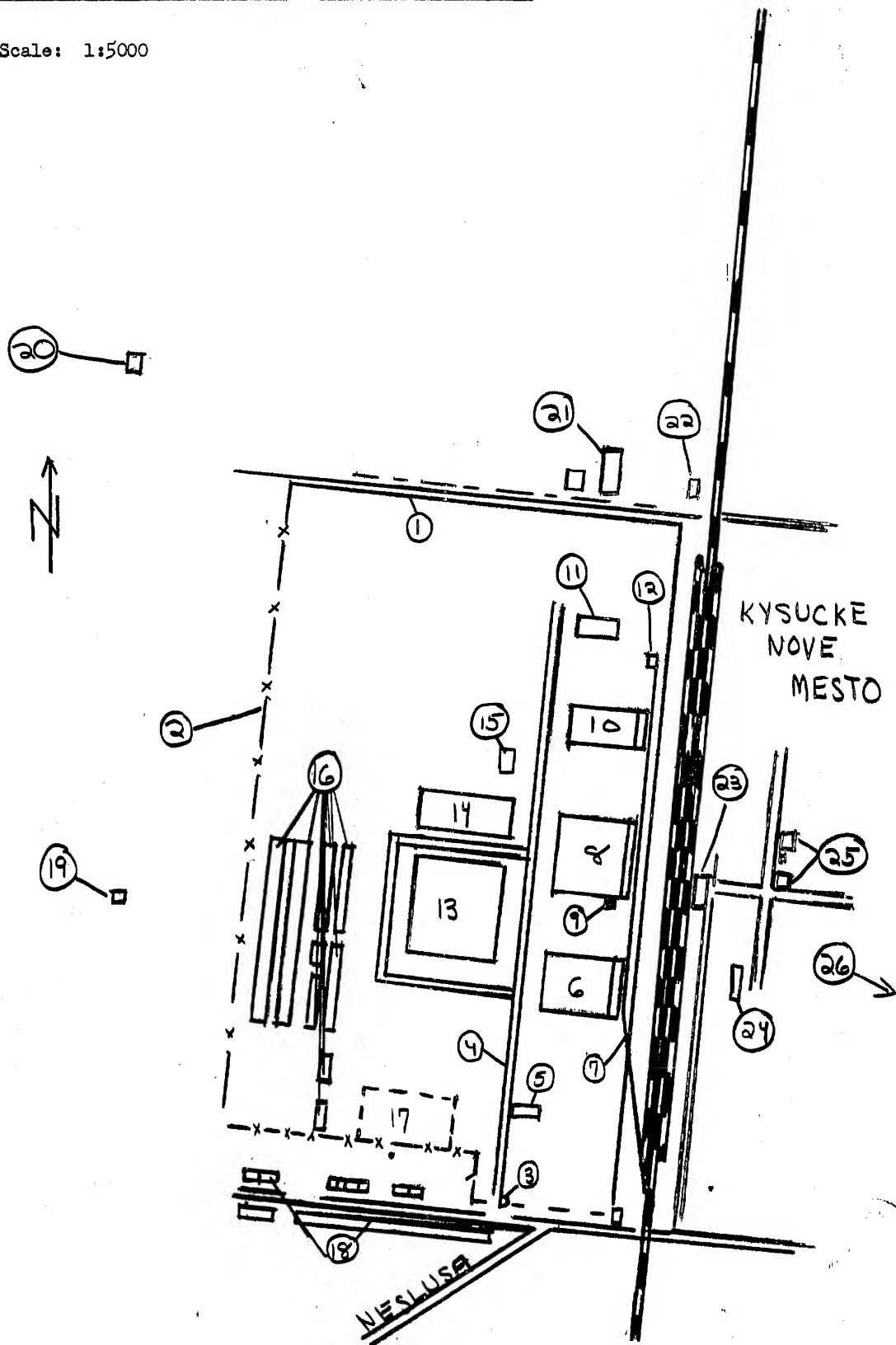
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Diagram of the V. Široky Plant, Kysucke Nove Mesto

Sketch "A"

Scale: 1:5000



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Legend to sketch of the plant, Sketch "A"

1. Concrete wall, 2 $\frac{1}{2}$ m. high, along the field path and the railroad track.
2. Wire fence surrounding the rest of the factory.
3. Entrance, 100 meters from the road junction. Brick guardroom, 6 x 6 meters.
4. Concrete lane, parallel with the railroad track.
5. Approximately 90 meters from the entrance is a brick building, 15 x 30 meters, with workshops of the CSSZ (Czechoslovak Construction Works).
6. Production hall, finished in June 1953, located 200 meters from the entrance and 30 meters from the railroad track. Built of reinforced concrete, with glass roof, 60 x 70 m., one floor. [] it was probably not yet in operation in December 1953. The hall is planned for final assembly. 25X1
7. Tracks along the production halls with loading ramps.
8. Main production hall where ball bearings are produced. It is about 60 meters from the above production hall, 70 x 80 meters in size, made of reinforced concrete, with a glass roof. It was the first hall to be built. Attached to it is a loading ramp. The part of the hall near the connecting road is two-story, 15 m. wide, containing offices.
9. In the vicinity of the first hall (No. 6) is a wooden shed, 10 x 10 meters, with a compressor, providing gripping pressure for machines in the ball-bearing shop.
10. A tool shop is about 70 m. from the ball-bearing shop, built of reinforced concrete, glass roof, 40 x 70 meters, one floor, with a loading ramp. The part of the building near the connecting road is two-story, containing offices.
11. New boiler house, not yet in operation, of reinforced concrete, 35 x 40 meters, 40 meters high, two chimneys close to each other. Building of the boiler house was greatly delayed and an investigation revealed that the armatures were installed in the reverse position. The building contractor was arrested. Heating was provided by two old railroad engines of Hungarian origin, parked near the boiler house, at the end of a siding.
12. Wooden shed for railway engines.
13. The largest hall was completed in the autumn of 1952, of reinforced concrete, with a glass roof. The end adjacent to the connecting road has offices on the second floor: manager, administration, security and cadre office, construction department, main accounting office, cashier, and works council office. Length of the hall along the road is 100 meters, width 80 to 90 meters. For the time being it contains some ball-bearing control departments, but in future it is to be a grinding shop. A connecting path runs around the hall.
14. The hardening shop is about 30 m. from the largest hall. It was completed in the spring of 1953, is 35 x 50 m., one floor, reinforced concrete. In mid-September, the hardening shop was not yet operating fully.
15. The lubricants and fuels store is in a one-story brick building, 40 meters from the hardening shop, 25 x 15 meters in size. Gasoline, trichloroethylene for cleaning ball bearings, paraffin, and greases are stored here.
16. Temporary workers' billets, consisting of two rows of one-story brick houses, including a kitchen and dining hall, a medical room, a dental room, and a machine shop. West of the billets are two rows of similar wooden barracks (80 x 20 m.) They will be pulled down later and new quarters built instead.
17. Site where new offices of the management are to be built.
18. Private apartment houses alongside the road which branches off the road to Neslusa. Those houses which are close to the plant will be pulled down to make way for the plant expansion.
19. New water reservoir on the slopes of a hill, about 150 meters from the plant. Water is piped from the village of Radola, SSE of the town, and the reservoir will supply both the plant and the town.
20. Air raid shelters are under construction since the summer of 1952, about 200 m. from the northwest corner of the plant.
21. Drevona factory, national enterprise, is located near the field road north of the plant. It is engaged in production of pressed boards from sawdust.
22. Marshalling yard.
23. Railroad building, opposite the ball-bearing shop, on the other side of the road.
24. Sawmill and large lumberyard, about 150 m. from the railway station.
25. The district military command is housed here in two requisitioned private buildings, 60 m. from the railroad station on the crossroad of a street leading from the station to the town, and one running parallel with the railroad track.
26. New blocks of flats for employees of the plant are under construction in the southern outskirts of the town, on the Kysuca river bank, south of the road which leads to the village of Radola. So far 9 three-story houses, 25 x 15 m., each containing 16 flats, have been completed. 25 small one-family houses are planned.

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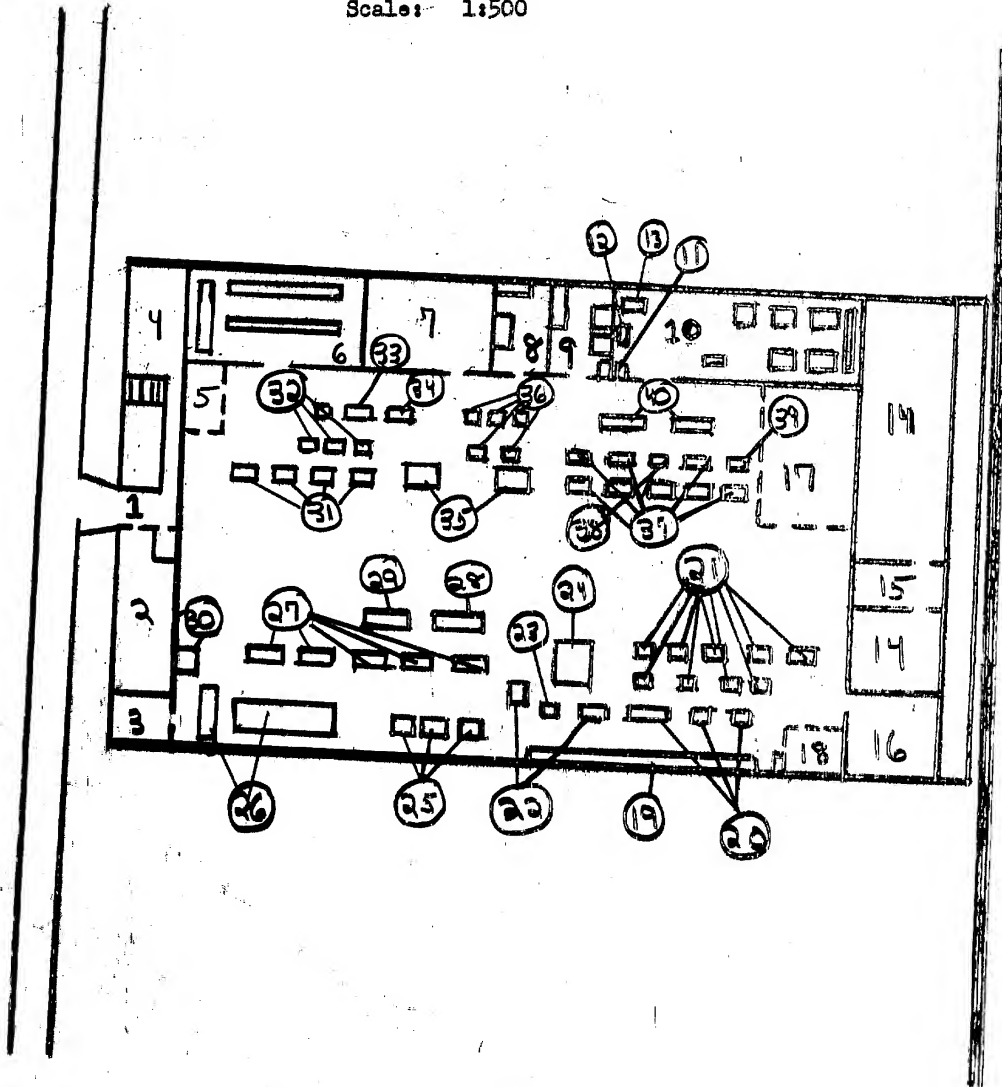
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Tool Shop of the V. Široky Plant in Kysucke Nove Mesto

Sketch #B¹⁰

Scale: 1:500



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Legend to the sketch of the tool shop, Sketch "B"

1. Entrance.
2. Cloakrooms along the wall. Also a small guardroom.
3. Lubricating-oil store for the tool shop. Poisonous materials for the hardening shop are also stored here.
4. Stairs to the cellar and to the first floor. Main control department of the tool shop.
5. Shipping department adjacent to the control department, separated from the tool shop by a wire fence.
6. Tool-sharpening shop, with small grinding machines.
7. Issue of tools, next to the sharpening shop.
8. A large Swiss micrometer for testing and measuring parts for ball-bearing production. In this room, marked 'grinding tool store', two engravers (probably die-makers) are at work.
9. Another room with three vertical coordinate drilling machines of various sizes for precision drilling. [redacted] Also a 25X1
work bench and a grinding machine for sharpening cutters and borers.
10. Hardening shop of the tool shop with four hardening furnaces and one tempering furnace.
11. Acetylene welding equipment is in the hardening shop.
12. Rockwell apparatus for testing hardness.
13. Blunt welding equipment, also in the hardening shop. The above shops, attached to the hardening shop, are in one unit, 15 meters wide.
14. Tools and spare parts store.
15. Exit to the loading ramp.
16. 'Operation' and 'Piece-rate' offices.
17. 'Inter-operation' department where spare parts must be passed before moving to other machines.
18. Welding shop separated from the production hall by a wooden partition.
19. Locksmith benches.
20. Two large pillar drilling machines, Mas type, and one multi-spindle drilling machine, also of Czech make.
21. Nine TOS milling machines of various sizes and types, horizontal, vertical, and universal.
22. Two hydraulic presses, maximum capacity 5,000 kg, of Czech make.
23. TOS slotting machine, for slotting grooves in the borehole.
24. Block for marking castings, next to the pressing and slotting machines.
25. Three lapping machines, also for final precision grinding [redacted] 25X1
Various precision instruments are machined on them, e.g. templates, calipers, measuring cubes, etc.
26. Six flat grinding machines for grinding shape and disc cutters, TOS make.
27. Borehole and surface grinding machines. Four of them are Kamenicek-TOS, and one is of Soviet production, Stanko, for precision grinding.
28. Wolman-TOS horizontal drilling machine, for large boreholes.
29. Thread grinding machine [redacted]
30. Measuring and enlarging apparatus, [redacted] 25X1
31. Four TOS-Kurim lathes SVR 16.
32. Four TOS milling machines.
33. Two shaping machines, of Czech make.
34. One universal grinding machine, Kamenicek-TOS.
35. Two foremen's desks. In this workshop the foremen have no offices of their own, only desks behind a wooden partition.
36. Five TOS lathes, of various sizes and types.
37. Eight TOS-Kurim lathes in two rows, SVR 16.
38. One grinding machine of Czech make, for sharpening cutters.
39. One center drilling machine, for drilling shafts.
40. Two large Wolman lathes.

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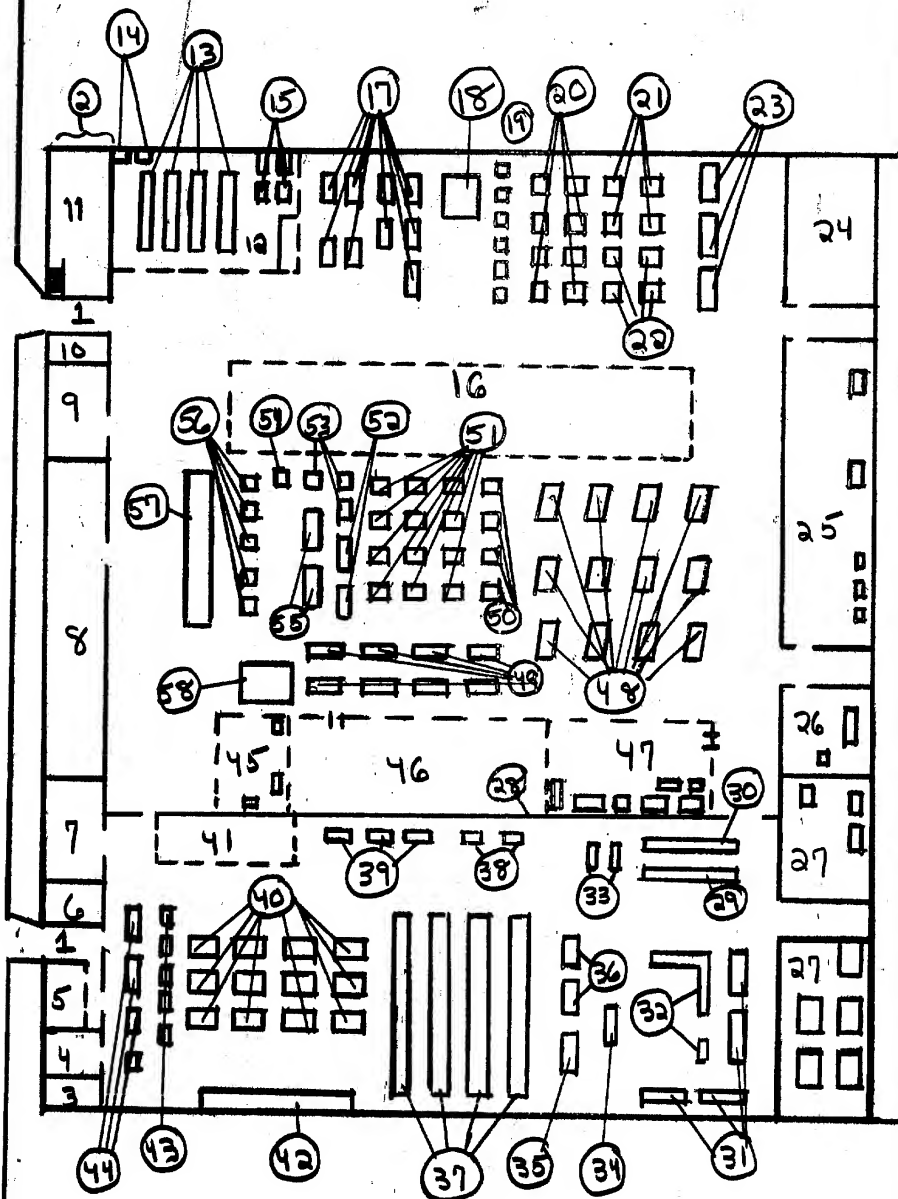
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Ball-Bearing Workshop of the V. Široky Plant in Kysucke Nove MestoSketch "C"

Scale: 1:500



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Legend to the sketch of the Ball-Bearing Workshop, Sketch "C"

1. Connecting path leading to the workshop, two entrances.
2. Along the path, in the western part of the building, are a number of smaller rooms. On the ground floor and on the second floor are offices.
3. Transformer for the ball-bearing workshop and the tool shop.
4. Arms store with an iron door, and no windows.
5. Offices of the so-called 'dispatchers' who cooperate with the planners and are considered by workers as slave drivers.
6. Guardroom, and stairs to the second floor.
7. Shipping department.
8. Cloakrooms and lavatories.
9. Control department for incoming goods, parts, and measuring instruments.
10. Guardroom of the other entrance. Opposite the guardroom is a flight of stairs to the second floor.
11. Electrical maintenance shop with a separate entrance. Inside is a grinding machine and a battery charger.
12. Ball-bearing assembly, separated by a wire partition.
13. Work benches in the assembly shop.
14. Two TOS drilling machines for regrinding boreholes, also used in assembly.
15. Four washing machines for cleaning ball bearings before packing. 25X1
16. So-called 'soft' control, behind a partition along the northern wall.
17. Line of nine machine tools, starting with internal grinding machines [redacted]
18. Foreman's desk.
19. Six polishing machines for circulation tracks [redacted] Under the foreman's desk are piled ball-bearing rings. 25X1
20. Eight external grinding machines, older types, foreign makes.
21. Four TOS grinding machines for boreholes.
22. Four grinding machines for surface grinding of rings of Czech production.
23. Three grinding machines for grinding the sides of rings of foreign makes.
24. Store of lubricating oils, trichlorethylene, greases and cleaning rags.
25. Materials store. One Wolman circular saw, one Soviet saw, Stanko type, and three band saws of Czech make.
26. Joiners' shop with one wood-planing machine and one wood-milling machine.
27. Hardening shop with four hardening furnaces and one tempering furnace. One Rockwell apparatus for hardness-testing and two small furnaces for hardening bearings, not yet in operation. The whole shop will be moved when the new hardening shop is completed.
28. Wall, about 35 meters from the southern wall, dividing the hall into two parts: the northern part is the so-called "ball-bearing shop" (kulickarna), and the southern one, the bearing production hall.
29. One straightening machine, for iron rods of Soviet make.
30. Crack and flaw testing machine [redacted] 25X1
31. Four hydraulic presses for cages [redacted]
32. Work benches and one TOS drilling machine.
33. One wire-cutter for cutting wire from which bearings are made; Czech. 25X1
34. One auxiliary press.
35. Vertical lathe for machining metal blocks on which the bearings are ground [redacted] new. 25X1
36. Two lathes, short, diameter 0,175 mm, driving plates for comparing grinding discs; [redacted] 25X1
37. Ball-bearing machines (16 machines in four rows) [redacted]
38. Two TOS-Kurim milling machines for cutting the lining of bearings.
39. Three TOS-Kurim lathes used in finishing the linings and for thread-cutting.
40. 12 capstan lathes for finishing linings and nuts.
41. Apprentices' workshop separated by wire netting. Five lathes, old, of various types, seven milling machines, four grinding machines, and one grinding machine for flat grinding.
42. Locksmiths' work benches.
43. Five polishing drums, for ball bearings.
44. Machine tools of the maintenance workers - lathe, milling and drilling machines.
45. Separated by a wall from the apprentice workshop is the maintenance shop, with a lathe, milling and drilling machines.
46. Control and operation department, separated by a wire partition.
47. Repair shop, next to the control department, also behind wire. Two TOS lathes, two TOS milling machines, one surface grinding machine, one borehold grinding machine, one drilling machine, one acetylene welding outfit.

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48. Automatic machines for bearing rings are between two wire partitions; 10 [] machines [] two Stanko Soviet machines. 25X1
49. Eight lathes, old types adapted to production of large rings. Various makes. 25X1
50. Four external stamping presses [] 25X1
51. 12 finishing lathes, new TOS-Kurim, for finishing rings (ball race and radius). 25X1
52. Two grinding machines, TOS-Kamenicek, one for surface and one for borehole grinding.
53. Three TOS milling machines.
54. One TOS drilling machine.
55. Two TOS milling machines, new.
56. Five automatic finishing machines, new, [] 25X1
57. Work benches, two foremen's desks (near the maintenance shop). 25X1
58. Seven new automatic machines [] not yet in operation. They will be installed as soon as one of the control departments is moved to another building. 25X1

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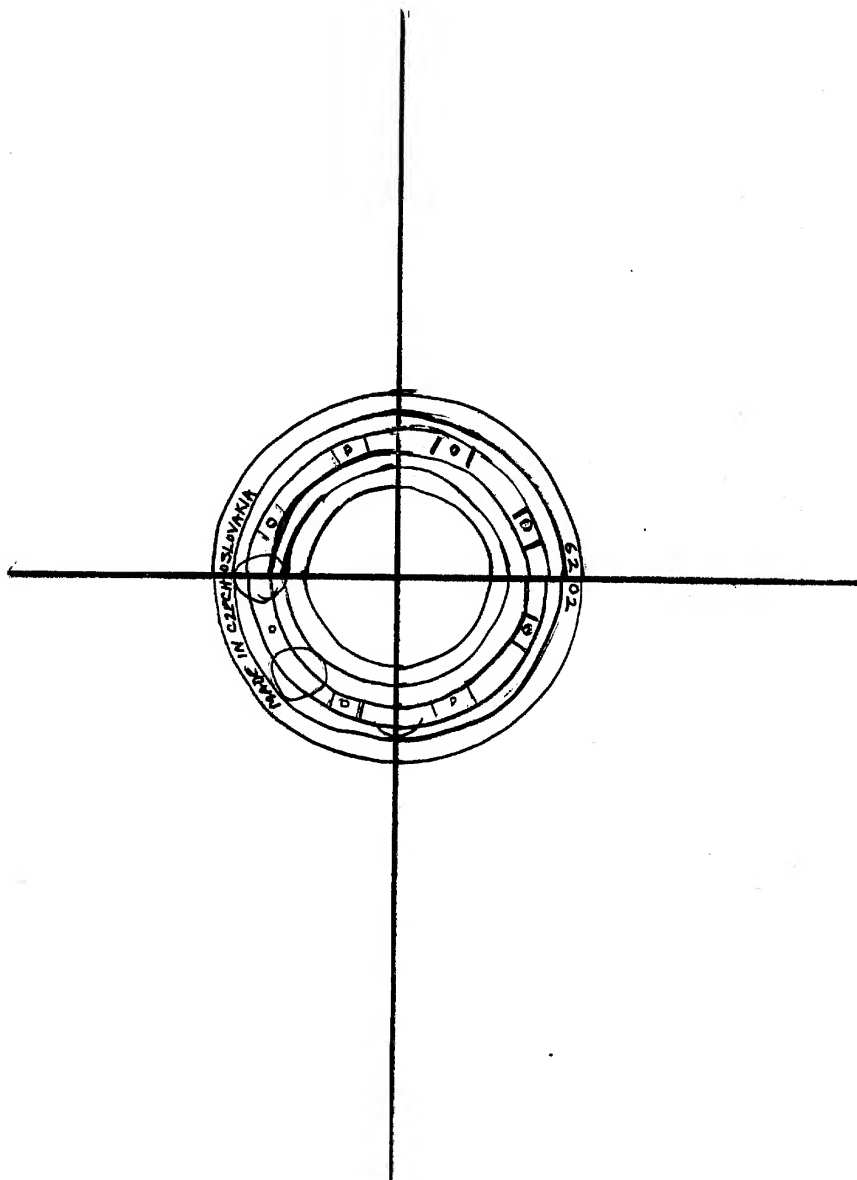
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Ball Bearing, Type 6202

Sketch "D"



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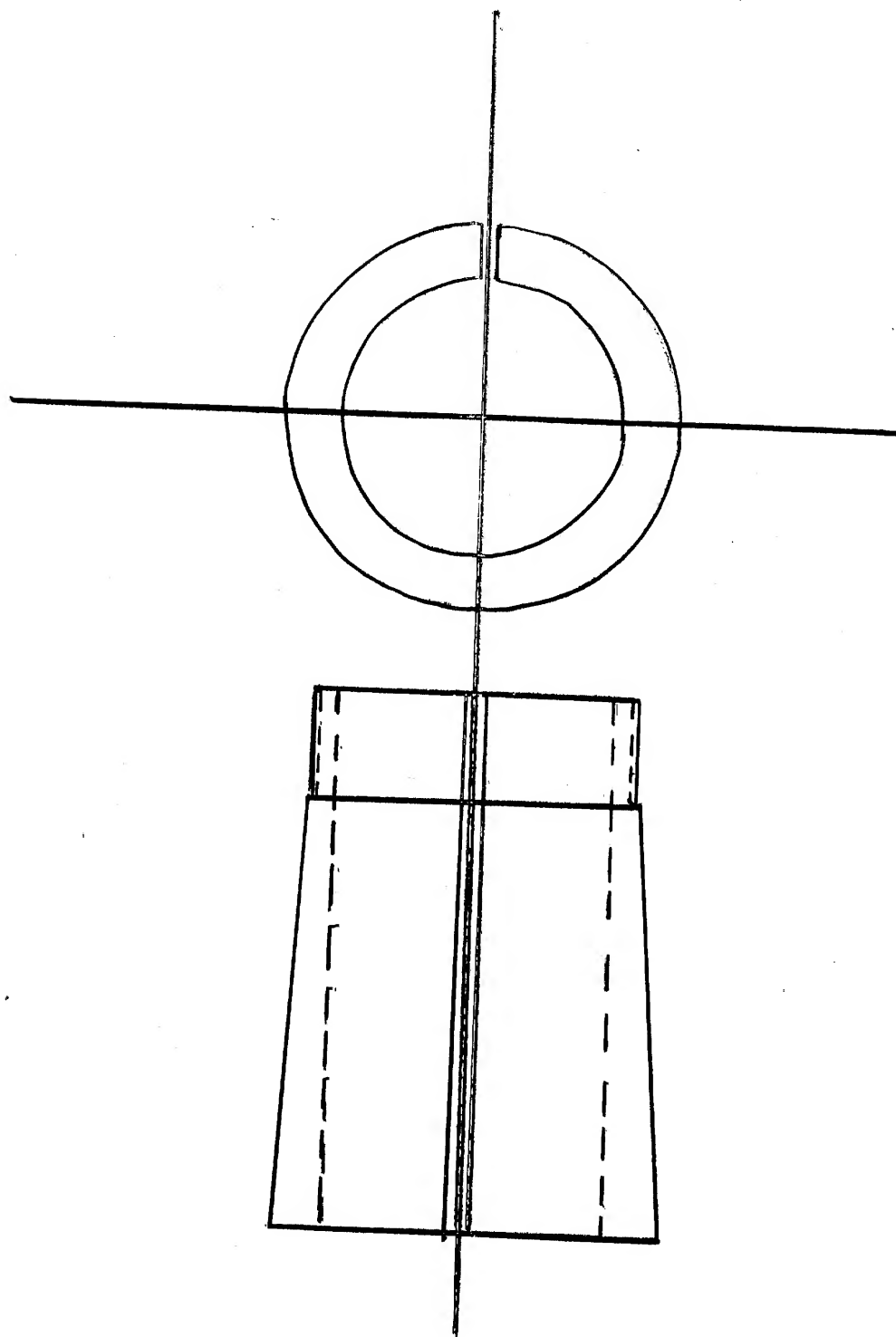
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Bearing Casing

Sketch "E"

a.)



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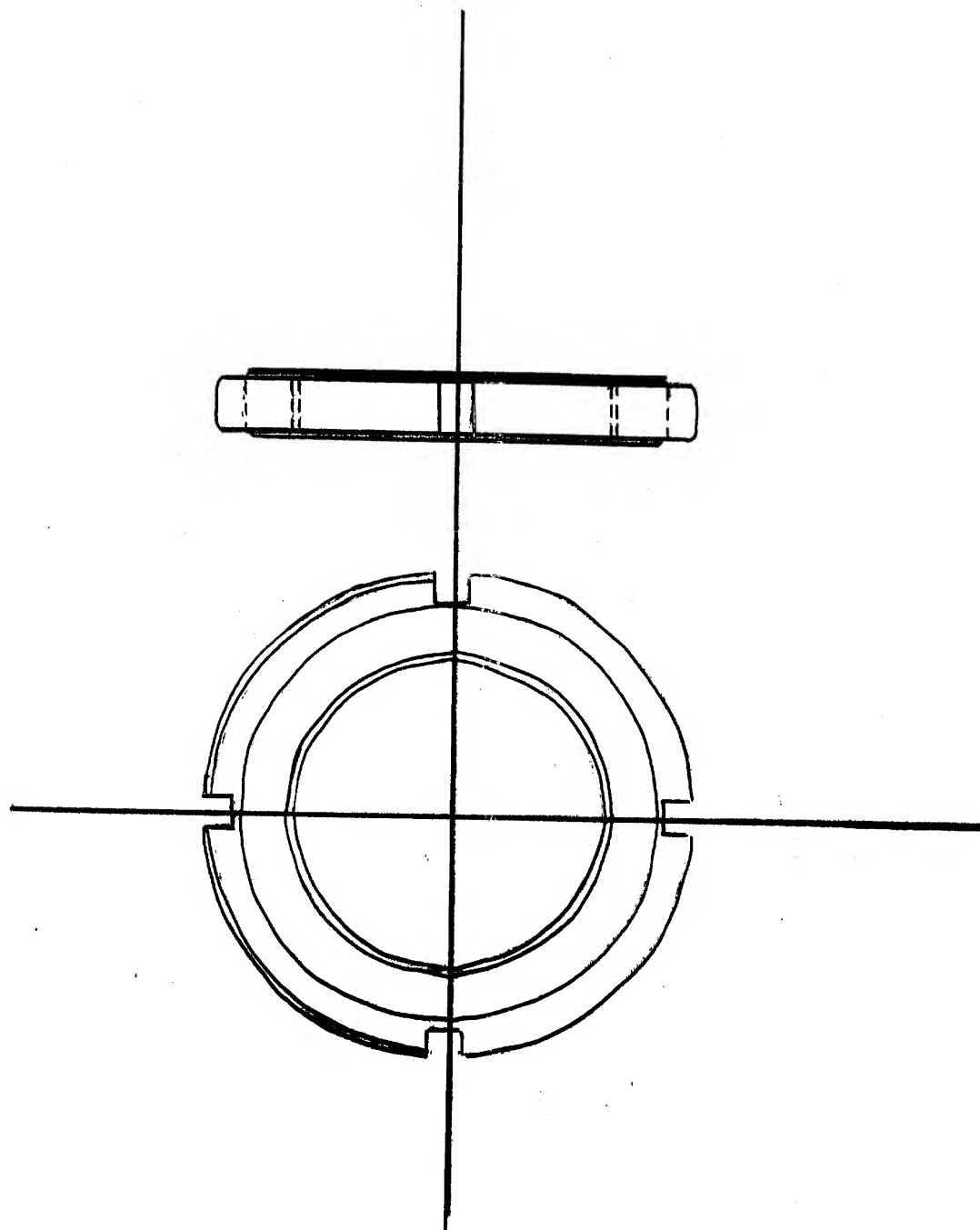
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b.)



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